

# Perceptions of Informatics Students' Toward the Implementation of English for Specific Purposes (ESP): Informatics Students' Voice

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ARTICLE INFO	ABSTRACT
<p><b>Keywords:</b> <i>English for Specific Purposes (ESP), Informatics, Informatics Students</i></p> <p><b>DOI:</b> <a href="https://doi.org/10.22437/langue.v3i2.46406">https://doi.org/10.22437/langue.v3i2.46406</a></p> <p><b>Received:</b> June 30, 2025</p> <p><b>Reviewed:</b> July 03, 2025</p> <p><b>Accepted:</b> July 17, 2025</p>	<p><i>This study explores informatics students' perceptions of the implementation of English for Specific Purposes (ESP) using a quantitative approach. Survey results presented in multiple tables highlight the critical importance of English language proficiency in the informatics field. Respondents consistently view English as essential for accessing global information and securing career opportunities in Information Technology (IT). Many students recognize that strong English proficiency enhances the promising career prospects in the informatics field. They rely on English for accessing technical literature and materials crucial to their studies, recognizing its broader role in facilitating research and international collaboration. Despite this recognition, practical engagement with English outside of formal classes is limited, although most find the existing English materials sufficient. Career readiness in terms of English proficiency varies among respondents, emphasizing the need for improved preparation for related exams and practical applications. In academic settings, English is pivotal for comprehending technical content and fostering interactions with peers and educators. However, challenges persist in understanding complex technical texts and adapting to academic writing standards in English. Recommendations from respondents include integrating more English-focused resources into curricula to better prepare students for the global demands of the IT industry. Overall, the surveys reveal a consensus on the necessity of enhancing English language skills for effective communication, academic success, and career advancement. English lecturers are encouraged to design ESP materials that are more aligned with the specific needs of informatics students.</i></p>

## Introduction

English for Specific Purposes (ESP), a specialized area within English Language Teaching (ELT), has been a notable field since the 1960s. The growth of ESP can be attributed to several factors, including the aftermath of World War II in 1945, the rapid advancements in science and technology, the widespread adoption of English as the global language for science, technology, and business, the economic influence of oil-rich nations, and the rising numbers of international students pursuing education in English-speaking countries. These developments collectively contributed to the flourishing of ESP as a distinct and significant area of study and practice within the field of ELT (Rahman, 2015). English for specific purposes (ESP), focusing

on the specific communication needs and practices of particular professional or occupational groups, has experienced significant growth over the last four decades, emerging as a prominent influence in both English language teaching and research (Hyland, 2007).

English for Specific Purposes (ESP) is generally interpreted as an approach to learning English that is based on the goals/needs of the learner. In the context of learning English in Indonesia, both in secondary schools and universities, especially for students outside the English department, the ESP approach is a popular choice (Agustina, 2014). This application approach is also in line with government policy in the field of education which emphasizes the aim of learning English, namely to improve students' ability to use English, especially for academic needs and professional careers with an emphasis on reading skills that enable students to understand authentic material topics according to their major effectively.

English for Specific Purposes (ESP) involves teaching tailored to meet learners' specific academic or professional needs in English. Developed over more than 50 years through extensive research and classroom application, ESP has gained significant influence in university and workplace settings worldwide (Hyland, 2022). The core concept of ESP recognizes that learners' language requirements vary greatly depending on their future academic or career paths, making it a crucial component of modern university education. As students transition to higher education and eventually to professional environments, they encounter new demands such as writing and reading diverse genres and adapting to different communication norms across disciplines. The English language skills acquired in school often do not adequately prepare them for these challenges. The need for English proficiency is crucial for students aiming for optimal achievement and preparedness in their future careers (Suramto et al., 2021). Providing learners with the chance to acquire proficient and thorough English skills is increasingly essential (Musikhin, 2016).

English is perceived as important for students' academic studies and their future work (Chia et al., 1999). English is widely recognized as crucial for both students' academic pursuits and their future professional careers. Academically, proficiency in English facilitates access to a wealth of knowledge, academic resources, and international academic communities. Moreover, in today's globalized economy, English serves as the primary language of international communication in various industries, including technology, business, and science. Proficiency in English enhances students' employability and opens doors to job opportunities, both locally and globally. It enables them to effectively communicate with colleagues, clients, and partners worldwide, contributing to their success in diverse professional settings.

In the implementation of teaching and learning English for Specific Purposes (ESP), the focus is on equipping students with English skills relevant to their specific fields of study (Solihah et al., 2023). The implementation of English for Specific Purposes (ESP) teaching for informatics students is very important to optimize their English language skills according to professional needs. Informatics students need to be able to communicate effectively in technical and professional contexts, such as writing technical reports, making presentations, and interacting in international work environments. ESP offers a focused approach to content relevant to the specifics of their field, increasing learning motivation and preparation for a global career. This research also aims to evaluate effective teaching methods, including the use of technology in learning and the integration of technical content in language teaching, to improve the quality of language education for informatics students in higher education.

English has evolved into the predominant language for global communication. The increasing demand for English as a second or foreign language places significant strain on the educational resources of numerous countries. ESP programs are designed to impart language skills and knowledge tailored to specific professional communities and academic disciplines. It

is crucial to closely assess the attitudes and viewpoints of both learners and educators, as this plays a crucial role in identifying the challenges faced in ESP courses (Boniadi et al., 2013).

Fitria (2023) explores the teacher's role and the challenges associated with teaching English for Specific Purposes (ESP). It finds that teachers shoulder several responsibilities, including managing learning activities, setting learning goals, fostering a positive classroom atmosphere, and assessing student progress. Challenges encountered by ESP educators include inadequate teacher quality and qualifications, inappropriate teaching methodologies, a lack of theoretical frameworks for ESP instruction, insufficient understanding of students' fields of study, limited ESP training, inadequate needs analysis, large class sizes, and students with varying levels of English proficiency. Additional hurdles involve students' motivation to learn English, demographic characteristics influencing ESP learning demands, varying English proficiency levels, language differences, limited vocabulary, overreliance on dictionaries, and insufficient skills in using dictionaries, particularly for ESP terms. Environmental factors and other obstacles, such as classroom conditions, shortages of teaching materials, overcrowded classes, and excessive exam-centric approaches, further complicate the teaching landscape. Future research should focus on enhancing curriculum comprehension and lesson planning.

Several issues encountered in teaching and learning English for Specific Purposes (ESP) at Indonesian universities encompass challenges from the perspectives of students, lecturers, and the university education system (Susana & Iswara, 2019). To address these challenges, lecturers are advised to adopt a systematic approach during the planning phase. This approach should begin with conducting a needs analysis, followed by organizing course design, and then selecting and developing appropriate materials. Supported by both theoretical insights and practical applications, this approach aims to enhance the ESP teaching and learning process at the university level in Indonesia. Ultimately, it aims to assist students in achieving specific language learning objectives relevant to their professional fields. Wahyuningsih (2018) indicates that teachers primarily view the challenges in ESP teaching through the lens of professional development, personal preferences, and perceptions of the subject. While the foundational principles of ESP teaching are generally considered adequate, the predominant challenges stem from critical elements such as curriculum development and policy formulation, which directly influence the overarching goal of ESP. This goal focuses on enhancing students' competence and professional skills within their respective fields through the effective use of English as a means to achieve mastery in their chosen disciplines. Meristo & Arias (2021) explore how English for Specific Purposes (ESP) teachers, who primarily teach General English at Estonian state-funded higher education institutions, perceive their roles. Using an abductive qualitative approach, the research delves into understanding the difficulties encountered in ESP teaching and identifying issues that hinder effective support for university teachers to enhance their practices. The findings underscore three significant challenges: navigating professional changes, addressing inadequate collaboration, and managing instability in ESP course delivery.

Fitria (2023a) investigates the challenges faced by English lecturers teaching English for Specific Purposes (ESP) in higher education. The study, using a descriptive qualitative approach with 58 participants from various institutions, reveals that ESP courses are predominantly taught in the 2nd semester, with some also offered in the 1st and 3rd semesters. Lecturers primarily focus on teaching speaking, writing, reading, vocabulary, and translation skills, with speaking skills posing the most difficulty. Many lecturers have extensive experience, noting that ESP instruction presents greater challenges compared to teaching English for General Purposes (EGP). Common challenges identified include designing syllabi and lesson plans, developing tailored course materials, selecting effective teaching methods, acquiring appropriate textbooks, addressing diverse student English proficiency levels and

motivations, managing differing student perceptions of ESP importance, and navigating unclear institutional policies regarding curriculum and facilities. Issues such as discrepancies in expected lecture hours, credit allocations, and inadequate compensation further complicate the implementation of ESP courses in higher education settings.

There are several previous studies related to English for Specific Purposes (ESP). Jalilah (2010) investigates how lecturers perceive the formulation of goals, development and organization of materials, implementation of teaching methodologies, and development of evaluation methods in English instruction for students enrolled in the Tourism Marketing Management Program at the Faculty of Social Sciences, University of Education (UPI) Bandung, which is not an English department. Findings indicate that the goals of teaching English to these students focus on preparing them to use English effectively in their future careers and achieve high scores on the TOEIC test. These goals stem from the students' need to communicate and promote tourism to international tourists and to enhance their employability post-graduation. Lecturers facilitate these goals by providing authentic and adapted materials, such as reading texts sourced from textbooks, magazines, newspapers, and the internet, alongside corresponding tasks. Teaching strategies employed include text discussions, lectures, and presentations, followed by exercises aligned with the text content. Furthermore, lecturers utilize both learner assessment and course evaluation to gauge whether students have met learning objectives and to assess the effectiveness of the course design.

Ayuningtyas (2015) examines the perceptions and English language needs of students. The study is significant due to the distinct English language requirements of these students compared to their peers in average high schools. The school follows the latest Indonesian curriculum, Kurikulum 2013, which is tailored to meet the specific needs of these students. Using a descriptive quantitative approach, the study employed closed questionnaires and interviews. Findings indicate that students' perceptions of their English proficiency across listening, reading, writing, and speaking skills are generally low, with speaking being the weakest area. Educators must focus on enhancing students' speaking skills and aligning their teaching methods with the evolving Indonesian curriculum requirements. Poedjiastutie (2017) investigates the challenges confronting the English for Specific Purposes (ESP) program in a university. In pursuit of enhancing student readiness for the workforce, the university aims to better prepare graduates to succeed in professional environments. Presently, many graduates from the English Department pursue careers as ESP teachers despite lacking sufficient pedagogical knowledge tailored to ESP instruction. The findings highlighted four essential aspects that are considered crucial in ESP classrooms but are currently underemphasized: focus on communication, learner-centered approaches, collaborative teaching methods, and the use of practical and authentic materials.

Susana & Iswara (2019) identify and characterize students' English for Specific Purposes (ESP) needs, as well as to understand their perceptions of the existing ESP teaching methods. The findings of this study can serve as a basis for future research, specifically in syllabus design and the development of ESP teaching materials. Given the students' recognition of the importance of speaking skills and their need for grammar lessons to support practical competence, ESP lecturers are tasked with implementing teaching strategies that are both captivating and motivational, ensuring a balanced emphasis on these areas. Mulyah & Aminatun (2020) investigate teachers' perspectives on teaching English in vocational schools, examining how these perspectives influence classroom practices and exploring factors that shape teachers' beliefs in the teaching and learning process. The study involved six English teachers from three vocational high schools. Teaching English in vocational schools, categorized under ESP, is perceived differently from teaching in senior high schools, requiring

specialized knowledge of materials, methods, and strategies. The findings reveal that teachers' beliefs do not always align with their classroom practices, influenced by factors such as class size, time constraints, mismatches with assigned textbooks, heavy workloads, and student needs.

Bekteshi & Xhaferi (2020) examine the necessity for students to learn English. It focuses on students' perceptions of English for Specific Purposes (ESP), taking into account their English proficiency levels, ESP learning practices, and their integration within Higher Education Institutions (HEIs). The study revealed that university students can acquire specialized vocabulary through English language courses, which significantly enhances their prospects in the engineering field. The primary motivation for students was to learn ESP for employment reasons, particularly to improve their communication skills. Yasminto (2021) explores how students perceive the importance of learning English for specific purposes (EAP) within the context of English education. Following completion of an EAP course, the study employed a quantitative method to analyze questionnaire data and a qualitative approach through descriptive analysis to address the research questions. The findings from the closed questionnaire indicate that 88.8% of students strongly support the focus on learning ESP: EAP in the English educational field, based on the scoring criteria. Specifically, out of 34 respondents who provided data, 56% strongly agreed, 35% agreed, 6% were doubtful, 3% disagreed, and 0% strongly disagreed. This suggests that while students may hold varying perceptions, they generally prioritize learning English that is tailored to their academic or professional needs.

Suramto et al. (2021) investigate nursing students' perceptions regarding the need for English for Specific Purposes (ESP) materials at the Nursing Study Program of Politeknik Kesehatan Palembang. The findings revealed that several assignments are deemed necessary for improving listening, speaking, writing, and reading skills. Both listening and speaking skills are crucial for nursing students, highlighting the importance of mastering these skills to meet their educational needs effectively. Mauludin et al. (2023) investigate how students perceive motivational teaching strategies and how social variables such as age and gender influence these perceptions among students enrolled at a public university in (country). The findings reveal that students find teaching strategies that facilitate mastery of skills in practical activities most motivating. These include providing clear instructions, assisting with task completion, offering constructive feedback and praise, fostering positive relationships, and consistently encouraging students. Age did not significantly affect students' perceptions. While most strategies were deemed motivating by both male and female students, two specific approaches (leading by example with focus and drive, managing diverse activities) were more motivating for female students than male students.

Bui (2022) investigates and contrasts how students and teachers perceive effective teaching methods for English for Specific Purposes (ESP). Findings revealed significant disparities between students' and teachers' views across four categories: task-based language teaching, corrective feedback and assessment, discipline-specific knowledge, and cultural integration. However, both students and teachers shared similar perspectives on three categories: language usage, utilization of technology, and grammar instruction. Interview data generally corroborated the quantitative findings and provided deeper insights into participants' perspectives. These results underscore the importance of teachers addressing their concerns regarding ESP instruction with students and gaining a clearer understanding of students' needs and expectations to bridge existing gaps effectively.

Fitria (2022) investigates the English language learning needs of non-native speakers in ESP. Most respondents graduated from Vocational High School and see higher education as

offering diverse career opportunities. They generally have a basic level of English proficiency, with strengths in simple vocabulary and expressions, but frequent grammar and pronunciation challenges. Motivation to improve English skills for effective communication and job prospects post-graduation is high. Key priorities include improving grammar comprehension, reading for information, writing proficiency, listening to presentations, and speaking with correct pronunciation. Students express a strong demand for English language materials, particularly specialized vocabulary relevant to their study fields.

Arslan & Akbarov (2012) determined the attitude of students towards English for Specific Purposes, and we want to learn their opinions about English for Specific Purposes. The majority of students exhibit a neutral stance towards English, finding it generally intriguing to learn, while only a small fraction considers it dull. Despite placing English courses lower in priority compared to their field-specific studies, students acknowledge the necessity of mastering English as it serves as the primary language of instruction at university. They also recognize the practical benefits of English proficiency for future career opportunities, including employment at international companies and roles abroad. However, there is a notable concern regarding students' confidence in using English outside of academic settings; half of the students express confidence, but a significant quarter do not, highlighting a significant issue that needs addressing. Despite these challenges, most students do not perceive learning English as a threat to their native language, indicating a generally positive and open attitude towards English proficiency among the student body.

Fitria (2020) provides a comprehensive overview of English for Specific Purposes (ESP) in the context of English Language Teaching (ELT). It discusses three main aspects: the general course design of ESP, the roles of teachers and students within ESP settings, and the diverse challenges encountered in ESP instruction. ESP in ELT focuses on meeting specific English language needs tailored to professional or academic contexts, with teaching strategies and activities aligned to these specific purposes. Teachers in ESP play crucial roles in organizing courses, setting learning objectives, creating supportive learning environments, and assessing student progress. Students engaged in ESP typically demonstrate targeted interests, subject knowledge, and effective learning strategies. Challenges for ESP educators include inadequate teaching resources and textbooks, insufficient teacher qualifications and methodologies, and a lack of robust theoretical frameworks. Students face obstacles such as diverse demographic characteristics, varying levels of English proficiency, language differences, vocabulary limitations, and reliance on dictionaries, particularly for specialized ESP terms. Environmental challenges encompass shortages of teaching materials, large class sizes, and an educational focus overly centered on examinations. ESP teachers need to assess the practicality of enhancing English teaching for ESP learners (Mulyadi et al., 2019). ESP teachers must evaluate whether it is practical to implement improvements in how they teach English to ESP learners. This involves considering the feasibility and effectiveness of introducing new methods or approaches that can enhance the learning experience and outcomes for students studying English for Specific Purposes. It implies that teachers need to carefully assess the potential benefits and challenges of adopting new instructional strategies or advancements in the field of ESP education, ensuring that any changes align with the specific needs and goals of their students.

Despite numerous studies exploring students' and lecturers' perceptions of English for Specific Purposes (ESP) across various disciplines such as tourism, nursing, engineering, and vocational education, there is limited research focusing specifically on informatics or computer science students' perspectives. Previous research tends to generalize ESP needs or emphasize vocational and professional programs, overlooking the unique linguistic demands, learning

preferences, and academic expectations of students in the field of informatics or digital technology. Additionally, most existing studies investigate ESP from the teacher's or curriculum designer's viewpoint, with less attention given directly to students' voices, particularly those in informatics programs. This study aims to fill that gap by presenting the authentic perceptions and voices of informatics students regarding the implementation of ESP courses in their academic context. It provides a student-centered exploration of how ESP aligns with their discipline-specific needs and future professional expectations. Unlike earlier works that focus on general or non-digital fields, this research offers a contextual and domain-specific contribution to understanding ESP implementation in the digital and informatics education landscape. Therefore, the purpose of this study is to investigate the perceptions of informatics students toward the implementation of English for Specific Purposes (ESP) in their academic setting.

## **Method**

This research adopts a quantitative approach using a descriptive survey method. A research method uses numerical data and statistical analysis to examine patterns, test hypotheses, and generalize findings. A structured questionnaire was developed as the primary data collection tool, allowing the researcher to gather measurable insights from a representative sample of informatics students. The use of a survey design enables the analysis of trends, patterns, and general attitudes among students regarding the relevance, effectiveness, and implementation of ESP in their field of study.

The research collected data from a questionnaire. A questionnaire is a research instrument consisting of a set of written or printed questions designed to gather information from respondents (Fitria, 2024). Data were collected through a closed-ended questionnaire designed to capture students' attitudes, opinions, and experiences regarding ESP instruction in the context of their academic and professional needs. The structured format of the questionnaire allowed for the collection of standardized responses, which were then analyzed statistically to identify trends and general perceptions among the participants. In addition, their research uses documents. A document in research refers to any written, visual, digital, or printed material that contains information relevant to the study (Fitria, 2023a). The related documents used, such as ESP articles or books, are analyzed to gain an in-depth understanding of theory, practice, and research related to the implementation of ESP in the context of information technology education.

The data collected through the closed-ended questionnaire were analyzed using descriptive statistical methods, specifically focusing on frequency and percentage. The questionnaire responses were gathered using Google Forms, which automatically tabulates the data and presents it in summary charts and tables. Each question was analyzed to identify the number of respondents selecting each response option (frequency) and the proportion of respondents expressed as a percentage of the total. This method helped illustrate the distribution of student perceptions toward the implementation of English for Specific Purposes (ESP) in the informatics department. The descriptive results were used to identify trends and general tendencies in students' attitudes, experiences, and expectations regarding ESP, without employing any inferential or advanced statistical techniques.

## **Findings and Discussion**

English for Specific Purposes (ESP) courses at the university level aim to integrate teaching general foreign language skills with specific language use in academic or professional contexts (Belyaeva, 2015). University students are a diverse group whose language needs span

communication within their academic disciplines and across various professional domains. Within their academic disciplines, students require English proficiency to fulfill study program requirements, access study materials, and effectively communicate their research findings. As future professionals, students must also grasp the specialized vocabulary and communication norms pertinent to their chosen fields. From this perspective, ESP is characterized not only as an instructional approach but also as the culmination of education, encompassing the comprehensive development of language units and communication skills.

English instructors play a crucial role in creating an engaging and effective learning environment, particularly in English for Specific Purposes (ESP) classes. They are responsible for designing a variety of teaching approaches that cater to the specific needs and goals of their students. This involves selecting appropriate instructional methods, materials, and activities that are relevant to the professional or academic contexts of the learners. In ESP, the focus is on teaching language skills and knowledge that are directly applicable to students' future careers or academic pursuits. Classroom management is also essential for English instructors, as they need to ensure that the learning environment is conducive to active participation and learning. This may include organizing activities, facilitating discussions, providing feedback, and maintaining discipline when necessary. English teachers are tasked with developing diverse teaching methodologies, delivering effective instruction, and implementing efficient classroom management strategies to foster a dynamic and interactive learning environment, particularly in English for Specific Purposes (ESP) courses (Pratiwi, 2022). Overall, English instructors in ESP settings aim to create a supportive and interactive atmosphere where students can develop their language proficiency and achieve their learning objectives effectively.

## Findings

**Table 1. Reasons for Choosing the Informatics Study Program and the Relationship Between Informatics and English**

No	Points	Questions	Dominant Responses
1.	Reasons for Choosing an Informatics Study Program	What was the main reason you chose to study the informatics program?	Bright career prospects in the IT industry (46.3%)
2.	The Influence of English on Informatics	How important do you think English language skills are in studies and careers in informatics?	Very important, because much of the literature and information sources are in English (87%)
3.	English Readiness	How confident are you in using English to understand technical materials in the field of informatics?	Self-confidence (53.7%)
4.	Benefits of English in Research	How do you think the benefits of English skills are in conducting research or case studies in the field of informatics?	Helps me access wider sources of information (81.5%)
5.	Involvement in English Language Activities	How often are you involved in academic activities that require the use of English outside of regular classes (e.g., seminars, workshops, or international projects)?	Sometimes (48.1 %)
6.	Perceptions About Learning Materials	What do you think about the adequacy of learning materials that use English in this informatics study program?	Adequate (51.9 %)

7.	Learning Experience	Do you feel that the use of English in the context of informatics learning helps improve your understanding of the material being taught?	Yes, very helpful (83.3 %)
8.	Use of English in the Workplace	How important do you think English language skills are in finding a job in the information technology industry?	Very important (63 %)
9.	Readiness for English Language Skills	How prepared are you for English language tests or exams relevant to the information technology industry?	Ready (57.4 %)
10.	Recommendations for Developing English Language Skills	What do you think the study program can do to help improve the English language skills of informatics students?	Providing opportunities to participate in English language seminars or workshops (56.3%)

In this questionnaire, respondents gave varying views regarding the reasons for choosing the informatics study program and the relationship between informatics and English. In this survey, many students chose the informatics study program because they saw bright career prospects in the IT industry (46.3%). English language skills are considered very important in studies and careers in informatics by the majority of respondents (87%) because literature and information sources are predominantly in English. Although the majority feel confident in using English to understand technical material (53.7%), more than eighty percent admit that this ability helps them access a wider range of information in informatics research (81.5%). However, students are involved in English language activities outside regular classes only occasionally (48.1%), even though they consider the learning materials in English in this study program to be adequate (51.9%). Almost all respondents felt that the use of English in the context of informatics learning was very helpful in understanding the material (83.3%). When considering a career, most feel that English language skills are very important in finding work in the IT industry (63%), although most feel prepared for relevant English language tests or exams (57.4%). Recommendations for improving English language skills include providing opportunities to participate in English language seminars or workshops, which were supported by more than half of the respondents (56.3%).

**Table 2. The Importance of Mastering English in Studying Informatics/ICT in Academic and Work World Contexts**

No	Point	Questions	Response
1.	The Importance of English Literature	How important do you think the ability to understand literature and technical documentation in English is in studying Informatics/ICT?	Important (48.1 %)
2.	Access to Global Information	How much does your ability to speak English make it easier for you to access the latest information and discoveries in the world of Informatics/ICT?	Makes it easier (55.6 %)
3.	Communication Skills	How important are English language skills in communicating with colleagues from various countries in international projects in the field of Informatics/ICT?	Very important (55.6 %)
4.	Job Opportunities	How much do you think English language skills can increase your chances of getting a job in the global Informatics/ICT industry?	Improved significantly (64.8 %)

5.	Interaction with Friends	How important is the English language's ability to interact with friends of Informatics/ICT services in English?	Very important (64.8 %)
6.	Project Preparation and Presentation	How important are English language skills in preparing and delivering project presentations or information technology solutions to global teams or clients?	Important (55.6 %)
7.	Participation in Seminars and Conferences	How often do you attend English-language international seminars or conferences to broaden your knowledge about the latest trends in Informatics/ICT?	Sometimes (44.4 %)
8.	Readiness to Use English	How prepared are you to face the challenges of a test or job interview using English in the Informatics/ICT industry?	Ready (48.1 %)
9.	Keeping Up with Technological Developments	How do your English skills help you in following the latest developments and innovations in the world of Informatics/ICT?	Helping (50 %)
10.	Recommendations for Developing English Language Skills	What do you think can be done to improve students' English language skills in the context of Informatics/ICT in an academic environment?	Integrating more English material in the Informatics/ICT curriculum (38.9%)

From the results of this questionnaire, it appears that the majority of respondents consider English language skills important in the context of Informatics/ICT studies. Most agree that understanding literature and technical documentation in English is very important (48.1%), and that proficiency in English makes it easier to access the latest information in the field of Informatics/ICT (55.6%). The ability to communicate in English is considered very important in international projects (55.6%), and respondents also see that English language skills can significantly increase their chances of getting a job in the global Informatics/ICT industry (64.8%). Interaction with international clients in English was rated as very important (64.8%), as was the ability to prepare and deliver information technology project presentations in English (55.6%). Despite this, only a small proportion regularly attend English-language international seminars or conferences to expand their knowledge (44.4%). Respondents felt they were quite prepared for tests or job interviews in English in the Informatics/ICT industry (48.1%), and they saw that their English language skills helped them keep up with the latest developments and innovations in this field (50%). To improve students' English skills in the Informatics/ICT context, most respondents recommended integrating more English language materials into the curriculum (38.9%). This suggests the need for further emphasis on developing English language skills in academic settings to support their preparation in an increasingly connected global world of work.

**Table 3. The Importance of Mastering English In Studying Informatics/ICT in an Academic/Educational Context**

No		Point	Response
1.	The Importance of English Literacy	How important do you think English language skills are in understanding literature and technical learning materials about Informatics/ICT?	Very important (38.9 %)

2.	Access to Information Sources:	How often do you use English to access global information sources about the latest developments in Informatics/ICT?	Sometimes (57.4 %)
3.	Difficulties in Learning	Do you face difficulties in understanding Informatics/ICT material due to limited English?	Sometimes (68.5 %)
4.	Academic Interaction	How important are English language skills in communicating with lecturers and other students in discussions or group projects in the field of Informatics/ICT?	Important (55.6 %)
5.	International Collaboration	How often do you interact with students or professionals from abroad in English for projects or research in the field of Informatics/ICT?	Sometimes (40.7 %)
6.	Influence on Writing	How does your ability to speak English affect the quality of the written assignments or reports you produce in your Informatics/ICT studies?	Improve quality significantly (50 %)
7.	Participation in Academic Activities	How often do you attend English-language seminars, conferences, or workshops that discuss the latest trends in Informatics/ICT?	Sometimes (48.1 %)
8.	Career Preparation	How much do you think being able to speak English will increase your chances of getting a job in the global technology industry after graduation?	Improved significantly (50 %)
9.	English Exam Readiness	How prepared are you for English exams related to the Informatics/ICT curriculum or professional certification in this field?	Ready (61.1 %)
10.	Development Recommendations	What do you think needs to be done to improve students' English language skills in the context of Informatics/ICT studies in an academic environment?	Providing more English courses related to information technology (37 %) Increasing the integration of English language materials in the curriculum (37%)

From the results of this questionnaire, it is clear that the majority of respondents recognize the importance of mastering English in the context of Informatics/ICT studies in an academic environment. Nearly 40% of respondents felt that English language skills were very important for understanding literature and technical learning materials about Informatics/ICT. The majority sometimes use English to access global sources of information about the latest developments in this field (57.4%), although more than two-thirds of them face difficulties in understanding the material due to limitations in English (68.5%). English language skills are also considered important in academic interactions with lecturers and other students in discussions or group projects (55.6%), although only a small proportion sometimes collaborate with students or professionals from abroad in English for projects or research in the Informatics/ICT field (40.7%). Respondents see that English language skills are significant in improving the quality of written assignments or reports in their studies (50%), and they also attend English-language seminars, conferences, or workshops on the latest trends in

Informatics/ICT occasionally (48.1% ). Prospectively, half of the respondents believe that English language skills can increase their chances of getting a job in the global technology industry after graduation (50%), while the majority feel prepared to face English language exams related to the Informatics/ICT curriculum or professional certification in this field (61.1%). To improve students' English language skills, recommendations include the provision of more information technology-related English courses (37%) and increased integration of English-language materials in the curriculum (37%), reflecting the need for better preparation to face future global challenges.

**Table 4. The Importance of ESP for Informatics Toward English Skills**

No		Point	Response
1.	Importance of Technical Vocabulary	How important do you think having an English technical vocabulary is in understanding information technology concepts?	Very important (59.3 %)
2.	Ease of Understanding Reading Material	How easily do you understand reading material in English about the latest developments in information technology?	Easy (68.5 %)
3.	Writing Ability in a Technical Context	How confident are you in writing technical reports or documentation in English?	Self-confidence (44.4%)
4.	Speaking Skills	How often do you use English for presentations or discussions on information technology topics?	Rare 957.4 %)
5.	Listening Skills	How good are you at understanding explanations or instructions in English related to software or information system development?	Good (59.3 %)

In this questionnaire, respondents gave varying views regarding the relationship between informatics studies and English language skills. The majority felt that having technical English vocabulary was very important for understanding information technology concepts (59.3%), and most found it easy to understand reading material in English about the latest developments in IT (68.5%). However, only a small majority feel confident in writing reports or technical documentation in English (44.4%) and rarely use English for presentations or discussions in an IT context (57.4%). In terms of listening, most respondents felt good at understanding explanations or instructions in English regarding software or information system development (59.3%).

**Table 5. Vocabulary in ESP (English for Specific Purposes) requirements**

No	Point	Response
1.	How often do you encounter unfamiliar technical words in English in lecture materials or academic reading?	Often (42.6%)
2.	What method is most effective for you in learning and remembering technical vocabulary in English?	Reading articles or books in English (50%) Using online or offline technical dictionaries (25.9 %)

3.	How confident are you in using technical vocabulary related to programming languages or networking in English conversations?	Quite confident (40.7%)
4.	Which areas of technical vocabulary do you feel need the most improvement for your academic and professional needs?	Programming languages, Networking, Cybersecurity, Databases, and other related topics
5.	How important do you think it is to understand and master technical vocabulary in English for your career in informatics?	Very important (57.4 %)
6.	How often do you actively practice using technical vocabulary in English when writing reports or academic assignments?	Sometimes (42.6 %)
7.	Which resource was most helpful for you in learning and developing technical vocabulary in English? (Select all that apply.)	Online technical dictionary (27.8 %), Journals and scientific articles in English (35.2%) Online forums and communities focused on informatics (22.2%), Technical textbooks in English (5.6 %)
8.	How do you usually learn and remember technical terms in English?	By using the term regularly in context (42.6 %)
9.	In your experience, what is the most challenging thing about learning technical vocabulary in English in the field of informatics?	Understand the definitions of these terms (37%), Pronounce these terms correctly and fluently (31.5%), Use these terms correctly in the appropriate context (31.5%)
10.	How do you assess the support from your lecturers in improving your technical vocabulary skills in English in the field of informatics?	Very good (48.1 %)

This questionnaire provides an overview of the importance of mastering technical vocabulary in English for students of informatics, informatics systems, or informatics engineering. The majority of respondents encounter unfamiliar technical words in lecture material or academic reading quite often (42.6%). They tend to use reading articles or books in English as the most effective method for learning and remembering technical vocabulary (50%), although the use of online or offline technical dictionaries is also quite significant (25.9%). The majority of respondents felt quite confident in using technical vocabulary related to programming languages or networking in English conversations (40.7%), while the areas of technical vocabulary that they most needed to improve were programming languages, networking, information security, and basic data (database). The suitability of technical vocabulary in English is considered very important for a career in informatics by the majority of respondents (57.4%), although they only occasionally actively practice using this vocabulary in writing reports or academic assignments (42.6%). The most helpful resources for learning technical vocabulary include online technical dictionaries, scientific journals and articles in English, and online forums and communities focused on informatics. Respondents thought that regular use of technical terms in context helps them in learning and remembering technical terms in English (42.6%). The main challenges in learning technical vocabulary include understanding the definitions of terms, correct pronunciation, and appropriate use in appropriate contexts. Support from lecturers in improving technical vocabulary skills in English in the field of informatics was considered quite good by the majority of respondents (48.1%), reflecting the important role of education in preparing them to face global demands in the world of work.

**Table 6. Reading in ESP (English for Specific Purposes) for Informatics Students**

No	Questions	Responses
1.	How often do you read articles or academic publications in English related to the field of informatics?	Sometimes (46.3 %)
2.	What method do you prefer most to understand the content of articles or technical texts in English?	Read carefully and note down main points (38.9%), Translate text into your native language (31.5 %), Read and look for definitions of unknown technical terms (25.9%)
3.	How often do you find it difficult to understand articles or technical texts in English?	Sometimes (68.5 %)
4.	Do you prefer to read English-language articles from certain sources (e.g., scientific journals, specialized websites) in the context of ESP learning?	Yes, I prefer certain sources (55.6 %), No special preference (27.8 %), No, I prefer random reading (16.7 %)
5.	How important do you think it is to understand and interpret English articles or texts in the context of your research or study?	Important (53.7 %)
6.	How do you usually respond to articles or technical texts that are difficult to understand in English?	Seeking help from lecturers or classmates (24.1%), Rereading the article several times (29.6%), Looking for the definition of an unknown term (44.4%)
7.	Do you feel confident in your ability to extract key information from English articles or texts in the field of informatics?	Somewhat confident (57.4 %)
8.	What resources do you find most helpful for improving your ability to read and understand English articles in the field of informatics?	Online technical dictionary (31.5 %), Special training in reading scientific articles (42.6%), Guidance from lecturers or tutors (25.9%)
9.	In your opinion, what are the main challenges in reading English articles in the context of ESP for the field of informatics?	Understand complex technical terms (40.7%), Understand the structure and organization of a typical article (40.7 %), Interpret research results or findings correctly (16.7%)
10.	How do you assess your lecturer's ability to support the development of the ability to read English articles in the field of informatics?	Good (42.6 %)

From the results of this questionnaire, it can be seen that the majority of respondents face challenges in reading articles or technical texts in English related to the field of informatics, with the majority stating that they sometimes do this activity (46.3%). Their most preferred method for understanding the content of an article or technical text is to read carefully and note down the main points (38.9%), while a smaller majority prefer to translate the text into their native language (31.5%) or look up definitions of terms unknown technique understand (25.9%). Respondents also admitted that they sometimes find it difficult to understand articles or technical texts in English (68.5%), but prefer to read from certain sources, such as scientific journals or specialized websites, in the context of ESP learning (55.6% ). The majority of

respondents consider it important to understand and interpret English articles or texts in the context of their research or study (53.7%). When faced with a difficult-to-understand article or technical text in English, most respondents looked for the definition of an unfamiliar term (44.4%) or reread the article several times (29.6%). Nevertheless, the majority felt quite confident in their ability to extract key information from English-language articles or texts in the field of informatics (57.4%). Respondents identified specific training in reading scientific articles as the most helpful resource for improving the ability to read and understand English-language articles in the field of informatics (42.6%). The main challenges in reading English articles in the context of ESP for informatics include understanding complex technical terms and typical article structure and organization (40.7% each). The lecturers' ability to support the development of the ability to read English language articles in the field of informatics was assessed as good to very good by the majority of respondents (85.2%), indicating an appreciation for the role of lecturers in supporting the ESP learning process in the academic environment.

**Table 7. Writing in ESP (English for Specific Purposes) for Informatics Students**

No	Questions	Responses
1.	How often do you write essays or essays on topics related to Information and Communication Technology (ICT) in English?	Sometimes (40.7 %)
2.	What writing topics do you most often encounter in courses or academic assignments in the field of informatics?	Software development (25.9%), Information security (11.1%), Computer Networking (20.4%), Database (37 %)
3.	How confident are you in writing a job application letter in English for an IT-related position after graduation?	Self-confidence (40.7%)
4.	What is your approach to compiling a CV (Curriculum Vitae) in English as an IT graduate?	Tailoring CV for each position applied for (77.8%)
5.	How important do you think it is to master effective writing skills in English to enter the job market in the information technology field?	Important (55.6 %)
6.	How often do you practice writing in English to prepare presentations or project reports in informatics studies?	Sometimes (38.9 %)
7.	What resources have helped you most in improving your writing skills in English for academic or professional needs in the IT field?	Technical reference books in English (40.7 %), Special writing courses for the IT field (29.6%), Use of tutors or lecturer guidance (25.9%)
8.	How do you respond to the biggest challenge in writing essays or scientific reports in English for informatics courses?	Finding the main idea and developing arguments (48.1%), writing in an academic and formal language style (37%)
9.	In your experience, what is the most difficult thing about writing a job application letter in English for a position in the IT industry?	Communicate qualifications and experience effectively (38.9%), Write persuasively and convincingly (38.9%)
10.	How do you assess the support from your institution in improving English writing skills for professional needs in the field of information technology?	Good (55.6 %)

From the results of this questionnaire, it appears that the majority of respondents face challenges in writing essays or essays on topics related to Information and Communication Technology (ICT) in English, with the majority stating that they do so sometimes (40.7%). The most frequently encountered writing topic in courses or academic assignments in the field of informatics is Databases (37%), followed by Software Development (25.9%) and Computer Networks (20.4%). Respondents also felt quite confident in writing job application letters in English for IT-related positions after graduating (40.7%), and the majority of them had a systematic approach to compiling a CV (Curriculum Vitae) in English, namely adapting a CV for each position applied for (77.8%). The ability to write English is considered very important for entering the job market in the field of information technology (55.6%), although the majority of respondents only practice writing in English for presentations or project reports in informatics studies occasionally (38.9%). The resources that are most helpful in improving writing skills in English for academic or professional needs in the IT field include technical reference books in English (40.7%) and writing courses specifically for the IT field (29.6%). The biggest challenge in writing essays or scientific reports in English for informatics courses is finding the main idea and developing arguments (48.1%) as well as writing in an academic and formal language style (37%). Writing a job application letter in English for a position in the IT industry is considered difficult in conveying qualifications and experience effectively (38.9%) as well as writing persuasively and convincingly (38.9%). The majority of respondents rated the support from their institutions in improving their English writing skills for professional purposes in the field of information technology as good (55.6%), showing appreciation for the institutions' efforts in preparing them to enter the world of work.

**Table 8. Listening in ESP (English for Specific Purposes) for Informatics Students**

No	Questions	Responses
1.	How often do you listen to news or podcasts in English that discuss the latest developments in the field of Information and Communication Technology (ICT)?	Sometimes (42.6 %)
2.	What method is most effective for you to understand content in YouTube videos or ICT-related audio materials in English?	Watching with subtitles in English (55.6%)
3.	How confident are you in understanding and responding to presentations or interviews in English that focus on technology and innovation?	Self-confidence (40.7%)
4.	How do you respond to the biggest challenge in understanding different accents or dialects in English audio or video recordings about ICT?	Using subtitles to aid understanding (50%)
5.	How important do you think it is to master English listening skills in preparing yourself for a career in the global IT industry?	Important (53.7 %)
6.	How do you usually respond to difficult-to-understand audio or video materials in English on technology topics?	Playback and re-listen to difficult passages (50%), Search for text translations if available (38.9 %)
7.	What resources have helped you most in improving your English listening skills for content about ICT?	English language learning websites or platforms (46.3%), Course or webinar materials in English (20.4%), Tech-focused

		podcasts or YouTube channels (29.6%)
8.	How would you evaluate the effectiveness of English videos or podcasts in helping you understand the latest developments in the ICT field?	Fairly effective (64.8%)
9.	In your experience, what is the most interesting thing about listening to English language material about ICT?	Gain insight into the latest trends and innovations (44.4 %)
10.	How do you assess the support from your lecturer in improving English listening skills for content relevant to the field of informatics?	Very good (51.9 %)

From the results of this questionnaire, it can be seen that the majority of respondents sometimes listen to news or podcasts in English that discuss the latest developments in the field of Information and Communication Technology (ICT) (42.6%). The majority of respondents considered watching with subtitles in English as the most effective method for understanding content in YouTube videos or audio materials related to ICT (55.6%). Most respondents also felt quite confident in understanding and responding to presentations or interviews in English that focused on technology and innovation (40.7%). The biggest challenge faced in understanding different accents or dialects in English audio or video recordings about ICT is using subtitles to aid understanding (50%). English listening skills were considered very important in preparing for a career in the global IT industry by the majority of respondents (53.7%). When faced with audio or video material that is difficult to understand, the majority of respondents tend to go back and re-listen to the difficult part (50%). The most helpful resource in improving English listening skills for content about ICT is an English language learning website or platform (46.3%). The majority of respondents evaluated English-language videos or podcasts as quite effective in helping them understand the latest developments in the field of ICT (64.8%). Gaining insight into the latest trends and innovations in the field of ICT was considered interesting by the majority of respondents (44.4%), and they generally rated the support of their institution in improving English listening skills for content relevant to the field of informatics as excellent (51, 9%). This shows that educational institutions provide adequate support in preparing students to deal with English language content in the field of information technology.

**Table 9. Listening in ESP (English for Specific Purposes) for Informatics Students**

No	Questions	Responses
1.	How often do you participate in presentations or discussions in English in the context of informatics studies?	Almost every week (45%)
2.	What presentation or discussion topic in English excites you the most?	Mobile application development, for example, online games (40%)
3.	What are the main barriers to speaking English in an academic context?	Feeling nervous or nervous when speaking in public (35%), Difficulty expressing ideas clearly (30%), Limited technical vocabulary (20%), Not confident in pronunciation of words (15%)
4.	How would you evaluate your ability to communicate orally in English?	Need more practice to improve my speaking ability (45%). Have difficulty conveying ideas clearly (40%). Uncomfortable speaking English (15 %)

5.	How important, in your opinion, is the ability to speak English to influence your career in informatics?	Very important (50 %)
6.	In what situations do you feel most comfortable speaking in English about IT-related topics?	Small group meetings (35 %), Presentations (25 %), Networking events (30%)
7.	How do you usually prepare for a presentation, speaking in English on a technical topic?	Practice several times (30%), make detailed notes (20%), use visual aids extensively (30%), focus on memorizing (20%)
8.	How would you rate your ability to speak English for IT discussions?	Needs more study (55%)
9.	What strategies do you use to improve your English-speaking vocabulary to discuss technical subjects?	Reading technical articles in English (20%), Watching videos or tutorials in English (30%), Practicing to use technical terms in conversation (15%)
10.	How can you improve your English communication skills in the IT field?	Increase confidence in speaking (20%), Increase collaboration with colleagues (5%), Improve the ability to explain technical concepts (25%), Open wider networking opportunities (45%)

This questionnaire reveals various aspects of informatics students' English-speaking abilities in the ESP context. Respondents showed quite active participation in English language presentations or discussions related to informatics studies, with the majority (45%) participating in these activities almost every week. They also show high enthusiasm for topics such as mobile application development (40%). The main challenges in speaking English in an academic context include nervousness when speaking in public (35%), difficulty expressing ideas clearly (30%), and limitations in technical vocabulary (20%). Overall, their self-evaluations showed that most respondents felt they needed more practice to improve their English speaking skills (45%) and often had difficulty conveying ideas clearly (40%). They also recognize the importance of the ability to speak English for the impact of a career in informatics (50%). Common strategies used to prepare English presentations on technical topics include practicing several times (30%) and using visual aids extensively (30%). Respondents also highlighted the benefits of improving communication skills in English, such as increasing self-confidence (20%) and opening wider networking opportunities (45%) in the IT field.

## Discussion

In the 1<sup>st</sup> table, this questionnaire is designed to gain an understanding of student motivation in choosing an informatics study program and the importance of English in this context. Questions cover the main reasons for choosing informatics, such as personal interest, career prospects, or influence from parents or mentors. In addition, the questionnaire also evaluated perceptions of the importance of English in studies and careers in informatics, how confident they were in using English for technical materials, and their experience in English-language activities outside the classroom. Other aspects include the benefits of English in research in the field of informatics, opinions about English language learning materials, as well as views on the need for English language skills in the workplace in the future. The questionnaire also aims to obtain recommendations from respondents regarding the development of English language skills in the context of informatics learning.

In the 2<sup>nd</sup> table, this questionnaire aims to explore the importance of mastering English in the context of Informatics/ICT studies and preparation for the global world of work. Questions

include how vital English language skills are in understanding technical literature, accessing the latest global information, and communicating with international colleagues in Informatics/ICT projects. In addition, the questionnaire also asked questions about how English language skills can expand job opportunities in global industries, how often interactions are conducted in English with international clients, and the importance of English in composing and delivering presentations of projects or technology solutions. Other aspects include participation in international seminars in English, readiness for tests or job interviews in English, and how English helps in keeping up with the latest technological developments. This questionnaire also invites recommendations for the development of better English language skills in the context of Informatics/ICT education in academic environments. The aim is to understand students' perspectives on the close relationship between mastery of English and academic and career success in the global Informatics/ICT field.

In the 3<sup>rd</sup> table, this questionnaire is designed to explore the importance of mastering English in academic and educational contexts in the field of Informatics/ICT. The questions ask how vital English language skills are in understanding technical literature, accessing current global information, and comprehending learning material. Apart from that, the questionnaire also evaluates the influence of English on academic interactions with lecturers and fellow students, international collaboration, as well as its impact on the quality of written assignments or reports. Other aspects include participation in English-language academic events, preparation for a global career after graduation, and readiness for English language exams or certification. This questionnaire also invites recommendations for improving the development of English language skills in the Informatics/ICT academic environment. The aim is to gain a comprehensive picture of the important role of English in supporting students' academic success and career preparation in an increasingly global technological world.

In the 4<sup>th</sup> table, this questionnaire describes several aspects of the relationship between informatics studies and English. Questions cover the importance of technical vocabulary in understanding information technology concepts, ease in understanding English-language reading material about the latest developments in this field, as well as confidence in writing reports or technical documentation in English. In addition, the questionnaire also evaluates how often students use English for presentations or discussions, and their ability to understand explanations or instructions in English related to software development.

In the 5<sup>th</sup> table, this questionnaire aims to collect information about students' experiences and needs in developing technical vocabulary in English for ESP purposes in the field of informatics, informatics systems, or informatics engineering. Questions regarding how often they encounter unfamiliar technical words in academic reading, as well as effective methods for learning and remembering technical vocabulary, provide insight into effective learning strategies. In addition, questions regarding the level of confidence in using technical vocabulary, the importance of mastering such vocabulary for a career in informatics, and the frequency of practice of using vocabulary in academic writing help assess their level of readiness in the technical use of English. An evaluation of the resources that assist in learning, the learning approaches commonly used, as well as the main challenges faced in learning technical vocabulary, provides a comprehensive view of student needs. Finally, an assessment of institutional support in improving English technical vocabulary skills shows the extent to which these needs are met in their academic environment.

In the 6<sup>th</sup> table, this questionnaire is designed to explore students' experiences and perceptions in reading and understanding articles or technical texts in English, especially in the context of English for Specific Purposes (ESP) for the fields of informatics, informatics systems, or informatics engineering. These questions included how often students encountered

unfamiliar technical texts, preferred methods for learning technical vocabulary, and the level of confidence and importance of understanding English texts in their academic and professional contexts. The evaluation also includes strategies for overcoming difficulties in understanding technical texts, resources that assist in learning, and an assessment of institutional support in improving the ability to read and understand English articles in the field of informatics. The overall questionnaire aims to provide a holistic picture of students' needs and experiences in developing their ESP competence for reading technical texts in English.

In the 7<sup>th</sup> table, this questionnaire describes an effort to evaluate students' experiences and needs in developing writing skills in English for ESP (English for Specific Purposes) in the field of informatics, informatics systems, or informatics engineering. These questions cover the frequency of writing in academic contexts such as essays on ICT, preparation of job application letters, and preparation of CVs, as well as an evaluation of confidence in using English for professional purposes. The evaluation also includes learning strategies used, resources that help in improving writing skills, as well as challenges faced in expressing ideas and qualifications in English. Overall, this questionnaire is designed to provide a comprehensive picture of student preparation in facing academic and career demands in the IT field by using English effectively.

In the 8<sup>th</sup> table, this questionnaire is designed to evaluate students' experiences and needs in improving English listening skills for ESP (English for Specific Purposes) purposes in the context of the field of informatics, informatics systems, or informatics engineering. These questions include how often they listen to news or podcasts about ICT in English, effective methods in understanding ICT-related audio or video content, as well as their level of confidence in responding to English-language presentations or interviews about technology. The evaluation also covers the challenges of understanding different accents, the importance of listening skills for a global career in the IT industry, and resources that help in improving their listening abilities. This questionnaire aims to provide a comprehensive picture of student preparation in facing academic and professional demands in the IT field by using English effectively.

In the 9<sup>th</sup> table, this questionnaire aims to evaluate informatics students' English speaking skills in the ESP context. Questions included how often they participated in presentations or discussions in English, the main obstacles they faced, such as nervousness or difficulty expressing ideas, as well as a self-evaluation of their oral communication skills. In addition, the questionnaire also asked about the importance of the ability to speak English for their career in informatics, the strategies they use to improve technical vocabulary, and the benefits of improving communication skills in the context of work in the IT field.

The survey highlights students' perspectives on the choice of informatics studies and the role of English within this domain. Many students are drawn to informatics due to promising career opportunities in the IT industry. English proficiency is crucial for accessing global literature and information in informatics, aiding understanding of technical materials, and enhancing career prospects (Fitria, 2023d). Despite acknowledging the importance of English, students engage in extracurricular English activities sporadically, despite sufficient learning materials in English within the program. Overall, respondents find English integral to comprehending informatics materials and preparing for IT industry careers, suggesting a need for more English-focused educational initiatives such as seminars and workshops.

The importance of English proficiency in informatics education and careers is underscored by respondents' views on its role in academic and professional contexts. Mastery of English facilitates access to literature and technical documentation, easing information retrieval and enhancing communication skills for international projects and client interactions. Despite recognizing its importance, few students regularly attend English-language events,

indicating potential gaps in practical language application. However, respondents feel adequately prepared for English-related tests and recognize their language skills' role in staying updated with industry advancements. Recommendations include integrating more English materials into the curriculum to better prepare students for global employment challenges.

In the academic environment, English proficiency is seen as crucial for understanding technical literature and collaborating with peers globally. Although many students use English occasionally for accessing global information, a significant majority face challenges due to language limitations. English skills are vital for improving the quality of academic outputs and participating in seminars related to informatics advancements. Prospective career opportunities also motivate students to enhance their English proficiency through targeted educational resources and curriculum adjustments.

Respondents recognize the significance of technical English vocabulary in understanding IT concepts, though fewer feel confident in writing technical reports or participating in English discussions. They encounter challenges in reading technical texts in English but value training in scientific article comprehension. The role of educators in supporting English learning in informatics is highly appreciated, suggesting a need for further educational support in this area (Fitria, 2023e). In writing, students encounter challenges in composing technical essays and job application materials in English, despite recognizing its importance in securing IT positions. They express confidence in CV preparation but acknowledge the need for more practice in formal writing. Resources like technical reference books and specialized writing courses are deemed helpful, highlighting the role of institutions in preparing students for professional English usage. Listening skills in English are crucial for understanding ICT-related content, yet students face challenges with different accents and dialects. They rely on subtitles and repeat listening for comprehension, underscoring the importance of English language platforms and educational support in enhancing listening proficiency. English-language videos and podcasts are considered effective for staying updated with ICT developments, reflecting the institutions' strong support in this aspect of English language learning. In speaking, students actively participate in English presentations and discussions related to informatics, emphasizing topics like mobile application development. Challenges include nervousness, clarity of expression, and technical vocabulary limitations, despite recognizing the impact of speaking skills on their IT careers. Strategies like repeated practice and visual aids are commonly used to improve communication, highlighting their role in boosting confidence and networking opportunities in the IT field.

Implementing English for Specific Purposes (ESP) tailored to informatics students involves a comprehensive approach to enhance various English skills essential in the field. Lecturers should integrate technical vocabulary specific to informatics, focusing on terms used in programming languages, software development, and IT systems. Assigning readings of technical literature and articles related to informatics helps students practice comprehension strategies for understanding complex texts and staying updated with industry advancements. Opportunities for practicing technical writing are crucial, where students can draft reports, documentation, and research papers in English, learn to structure documents effectively, and use precise language. Listening exercises with podcasts, lectures, and technical discussions in English improve students' ability to comprehend spoken technical information and different accents. Speaking activities such as presentations and discussions on informatics topics encourage students to articulate ideas clearly and confidently in English, addressing technical concepts and industry trends. These strategies collectively prepare informatics students to excel academically and professionally by developing their vocabulary, reading, writing, listening, and speaking skills in English within relevant contexts of the IT field.

## **Conclusion**

The surveys across multiple tables underscore the critical importance of English language proficiency in the informatics field. Respondents consistently highlight English as essential for accessing global information and securing career opportunities in IT. Many students are drawn to informatics due to the promising career prospects facilitated by English proficiency. They rely on English for accessing technical literature and materials crucial to their studies, recognizing its broader role in facilitating research and international collaboration. Despite this recognition, practical engagement with English outside of formal classes is limited, although most find the existing English materials sufficient. Career readiness in terms of English proficiency varies among respondents, emphasizing the need for improved preparation for related exams and practical applications. In academic settings, English is pivotal for comprehending technical content and fostering interactions with peers and educators. However, challenges persist in understanding complex technical texts and adapting to academic writing standards in English.

Recommendations from respondents include integrating more English-focused resources into curricula to better prepare students for the global demands of the IT industry. Overall, the surveys reveal a consensus on the necessity of enhancing English language skills for effective communication, academic success, and career advancement in informatics. They underscore the role of educational institutions in providing adequate support through English seminars, workshops, and integrated learning materials. These efforts are for academic achievement and future professional success in the global IT industry.

English lecturers are encouraged to design ESP materials that are more aligned with the specific needs of informatics students, such as incorporating technical vocabulary, reading authentic IT-related texts, and practicing real-world communication scenarios. Lecturers should also consider using task-based learning methods and integrating digital tools relevant to the students' future work environments. Providing opportunities for project-based learning, collaborative activities, and speaking practices can enhance student motivation and practical English usage. Future studies are encouraged to explore the perceptions of ESP lecturers or curriculum developers regarding the implementation of English for informatics students. Additionally, researchers may conduct comparative studies between students from different majors or institutions to examine how contextual factors influence English learning needs and preferences. Employing a mixed-methods approach could also yield deeper insights into learners' motivations, challenges, and the effectiveness of current ESP teaching strategies.

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